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Predicting Gentrification: Seattle-Tacoma

Metropolitan Region

Gentrification is a phenomenon that affects countless urban areas in the United States and the rest of the world. The term refers to the socio-cultural displacement that occurs as a result of the influx of wealthier people into low income and working class communities. Consequently, the average income increases in the community, which sometimes results in the eviction of lower-income residents who cannot afford increased rents, house prices, and property taxes. In addition, new businesses, catering to a more affluent base of consumers, move into formerly blighted areas, further increasing the appeal to more affluent migrants and decreasing the accessibility to less wealthy natives. “A vicious cycle is created in which the poor are continuously under pressure of displacement and the wealthy continuously seek to wall themselves within gentrified neighborhoods,” (1985, p. 196) writes Peter Marcuse in his article “Gentrification, Abandonment, and Displacement.”

This paper presents an analysis of gentrification in the Seattle-Tacoma metropolitan region utilizing Geographic Information Systems technology. The project’s goal is to predict the likelihood of gentrification occurring in various clusters throughout this region. The purpose is to determine which areas in this region are likely to be affected by gentrification in the future in order to plan for potential negative consequences for the original inhabitants (e.g. low-income displacement, decreasing racial heterogeneity). The long-term goal is to encourage preventative measures by highlighting clusters of high risk, rather than addressing the negative consequences

post gentrification or completely ignoring them. The main question pursued in this analysis involves the conditions that attract economic development and gentrification in low-income neighborhoods. What neighborhood prerequisites facilitate the drive to gentrify? And what combinations of conditions are the most likely to attract future gentrification efforts?

Theoretical Framework

In order to answer these questions, an exploration of the literature on gentrification as necessary. This project is situated within a vast literature on the phenomenon of gentrification. Data selection choices were influenced by theoretical explanations of the causes of gentrification. The analysis drew from the two major perspectives on gentrification. The first, supply-side theory of urban gentrification, derives from the work of geographer Neil Smith. It explains gentrification as an economic process consequent to the fluctuating relationships among capital investments and the production of urban space. The second, demand-side theory (advanced by scholars such as David Ley and Sharon Zukin), highlights the consumption preferences of gentrifiers as major causes of gentrification.

Supply-side interpretations of gentrification influenced data collection and analysis processes for this project. Two factors were chosen based on the literature in this camp: U.S. Census blockgroup poverty status and parcel taxable value. Neil Smith, in his book *The New Urban Frontier: Gentrification and the Revanchist City* (1996), argues for a systematic understanding of gentrification, rather than a simple consumer-driven one. He emphasizes capital disinvestment; in short economic incentives force landlords in a declining residential area to under-maintain their buildings, causing further deterioration of the neighborhood's housing stock until the buildings are so undercapitalized relative to the land value. From this derives the

Rent-gap Theory describing the disparity between "the actual capitalized ground rent (land price) of a plot of land given its present use, and the potential ground rent that might be gleaned under a 'higher and better' use" (1987, p.462). Neil Smith argues that gentrification is rooted in the structure of capitalist society. He identifies a relationship between economic crisis and gentrification, noting that economic crisis sparks geographic shifts of financial capital investments from previous areas of investment. Thus, if investment were directed primarily to the suburbs, it would be redirected to underdeveloped inner cities. Underdevelopment is a key point that helped identify the two supply side factors for measuring the potential for gentrification in the Seattle-Tacoma metro region. This is relevant in that it identifies how underdevelopment in the inner city can bring about conditions, like the rent gap, that facilitate gentrification.

There is a similar emphasis on disinvestment in other supply-side research. Lipton's article "Evidence of Central-city Revival" (1977). In this article on the existence of middle and upper class neighborhoods in central cities, Lipton argues that there is clear evidence that there is an increase of such neighborhoods in major U.S. cities. He argues that abandonment may speed up revival by allowing the consolidation of parcels, facilitating redevelopment, and making property acquisition less costly (Lipton, 1977). Peter Marcuse's (1985) article on gentrification in New York City looks at the origins of gentrification and abandonment and their interrelationship. He posits that these two phenomena occur side by side; abandonment plays a key role in fueling gentrification. Schaffer and Smith give a detailed examination of a pre-gentrification case study. They look at the extent to which gentrification appears to be occurring in New York City's Harlem neighborhood. By looking this case study, the researchers hope to shed light on the causes of gentrification; their research focuses on the pre-gentrification stage, in

which small pockets of changes may be the beginnings of gentrification. The authors identify factors like increases in income, rent levels, and housing speculation occurring in small pockets within Harlem, which may prelude gentrification.

The demand-side theory of urban gentrification posits that the "socio-cultural characteristics and motives" (Hamnett, 1991, p.2000) of the gentrifiers are most important to understanding the gentrification of the post-industrial city. Hjorthol and Bjørnska (2005), in their article on gentrification in Norwegian cities, fall on the consumption side of the debate. Their article addresses why central areas in Norwegian cities are becoming more popular. The authors focus on consumption and lifestyle. They focus on attractive advantages such as walkability and biking distances. In addition, access to cultural and leisure activities can also serve as catalysts for gentrification according to the authors. David Ley (1986) pinpoints a fundamental dimension of gentrification: the orientation of city economies to service economies. He emphasizes the importance of urban amenities in this process. Such a process leads to the production of professionals, managers, and other employees working downtown, who then provide the demand base for housing reinvestment in the inner city. He identifies the "importance of amenities in shaping the housing market" (Ley, 1986, p.524). He notes that the "amenity bundle" offered by inner cities in terms of character districts, heritage dwellings, and view and waterfront sites influence the extent of gentrification. Demaris Rose, drawing from Ley's ideas, posits that "gentrifiers and their social and cultural characteristics [are] of crucial importance for an understanding of gentrification" (1984, p.56)

Ley also emphasizes a prime amenity that can spur gentrification: the availability of artistic attractions. The author considers the role of artists as agents, and "aestheticisation" as a process, in contributing to gentrification. This is a useful perspective because it gives attention

to another factor, creativity, which can act as a promoter of gentrification and economic development. Ley identifies artists as facilitators, or “cultural intermediaries,” that set the stage for mainstream gentrification by strengthening the cultural capital of neighborhoods. This perspective is relevant because it adds a layer beyond factors like the housing and rental market and other physical characteristics. This perspective justified choosing museums within the Seattle-Tacoma metro region as important points of interest.

Sociologist Sharon Zukin (1987) looks at gentrification through such issues as production, consumption, and social reproduction of the urban middle class, as well as the factors that create a supply of gentrifiable housing and demand for it. The article explores "supply-side" interpretations of gentrification, which stress the economic and social factors that produce an attractive housing supply in the central city for middle-class individuals, and "demand side" interpretations, which affirm a consumer preference, for demographic or cultural reasons, for the buildings and areas that become gentrified. Thus, unlike the previous literature, she considers both sides as providing important answers. Her melding of the two perspectives serves as the basis for the analysis conducted in this study. It recognizes the importance of both upper class taste as well as the market conditions that facilitate gentrification.

Methods

Factors that contribute to gentrification were narrowed through exploration of the literature. The main factors came down to parcel level analysis in King and Pierce county of: poverty status, taxable value, year built, property type, land use, and three major points of interest (parks, museums, and farmers markets). The attributes selected from Pierce and King parcels are: year built, taxable value, land use, and property type. The year built attribute was

used to select out all King and Pierce parcels built pre 1960. These parcels were designated as historic. Once the parcels were narrowed to historic parcels, areas with high densities of historic parcels were identified using the Point Density tool in ArcMap's Spatial Analyst tools. Then the results were classified according to high and low densities; the clusters with high densities of historic parcels were isolated and designated as historic districts. Parcels that fell within these districts were selected out using Select by Location. Views were also considered for this study. Using Viewshed Analysis, the study identified parcels with views of major water bodies in the Seattle-Tacoma metro region. Then selecting all parcels that intersect the view zones narrowed the historic parcels. The output was historic parcels with views.

Another process in this study is service area analyses for parks, museums, and farmers markets, three major points of interest. These factors are considered demand side influences, which increase the desirability of neighborhoods. Walking distance service areas were run on King and Pierce historic parcels with views in relation to the points of interest. The following service areas were run: five minutes walking distance to parks, ten minutes walking distance to museums, and fifteen minutes walking distance to farmers markets. Because many service areas overlapped, those with the most overlap were given higher magnitude than those with less overlap. Pierce and King poverty rates were then measured using U.S. census 2000 poverty demographics. Poverty rates were classified by standard deviation, and parcels within high poverty zones were selected. Finally, all three service areas were spatially joined to Pierce and King historic parcels with views within high poverty rate areas, by matching the service areas to the closest parcels. This output included the following gentrification factors: taxable value and walkability (determined by combining points of interest service areas). Classified values of taxable value and walkability were assigned values 1-5 (e.g. 1 = high taxable value, 1 = low

walkability). A total index was determined by adding the two factors together. This value was used as the Z value (height) for the gentrifiable parcels in order to extrude them in ArcScene 3D layout.

Results

The analysis run on Pierce and King county significantly narrowed each county's parcel counts. The final parcel count for Pierce came to 3,041 out of the original 302,082, while King's final parcels came to 17,388 out of the original 590,819. The parcels are located within primarily urban areas in the Seattle-Tacoma metro region. This result was expected because the variables considered (e.g. historic parcels & farmers markets) are primarily located in urbanized areas, which was reiterated in the gentrification literature. The most significant clusters of gentrifiable parcels are located in Seattle and Tacoma. These clusters yielded the most points on the high end of the gentrification index. The gentrification zones within Tacoma and Seattle displayed the most overlap between the service areas of the interest points, as well as higher poverty rates compared to more rural areas. In addition, although high end single family and apartment parcels appeared in the urban downtown, low value parcels exist along the periphery of the cities' urban cores. When all of these factors were applied to the total parcels, the most high-risk clusters appeared in the inner-city neighborhoods.

Critique and Future Research

Although this analysis focuses on a social justice issue, a number of drawbacks can be identified due to the nature of the data used. A major drawback of this analysis is the absence of input from communities that run the risk of future gentrification. The field of

critical and participatory GIS has been since the 1990s (Schuurman, 1999). The increasingly recognized importance of incorporating local knowledge in GIS studies highlights how local community input would benefit projects such as this analysis of gentrification.

Pavlovskaya (2006) makes strides towards recognizing GIS as a tool that can be utilized in qualitative research. My project primarily focuses on quantitative analysis. However, incorporating a more mixed method could expand its relevance to local residents. Pavlovskaya writes, "...a growing literature on the so-called 'mixed methods' explicitly makes a case for combining quantitative and qualitative techniques, and the number of such projects has grown exponentially" (2006, p. 2,006). Thus, including inner city residents' own fears about gentrification in their neighborhoods could potentially strengthen this project.

In addition, the process of determining factors that attract future gentrification could incorporate views from local residents who have already felt the affects of gentrification. Surveys or focus groups could be beneficial methods for collecting perspectives on the prerequisites to gentrification. In the article "Geo-ethnography: Coupling Geographic Information Analysis Techniques with Ethnographic Methods in Urban Research," by Mathews et. al (2005), we see how qualitative approaches can be successfully incorporated into GIS analysis. They couple geographic information system technologies with ethnographic data gathered for a study on low-income families and their children in three cities. It is clear that such a goal would require more time and resources to complete; however, collecting data from local residents could broaden the type of factors taken into consideration.

Conclusion

In summary, Geographic Information Systems is a vital tool for pinpointing parcel clusters at risk of gentrification within inner-city neighborhoods. Due to the limited time frame and resources of this project, more factors that facilitate gentrification could not be considered. Factors such as local government policies and the affects of those policies on disadvantaged residents should be considered in future research on gentrification. Incorporating these influences, which are harder to measure and map, into a GIS based study would be an important stride towards ameliorating the negative consequences of and even interrupting unbridled gentrification in inner-city neighborhoods across the world.

References

- Hamnett, Chris. (1991). The blind men and the elephant: the explanation of gentrification. *Transactions of the Institute of British Geographers*, v. 16, 173–189.
- Hjorthol, R. J. & Bjørnska, T. (2005). Gentrification in Norway: Capital, Culture or Convenience. *European Urban and Regional Studies*, 12(4), 353-371
DOI: 10.1177/0969776405058953
- Ley, D. (1986). Alternative Explanations for Inner-City Gentrification: A Canadian Assessment. *Annals of the Association of American Geographers*, 76(4), 521-535.
- Ley, D. (2003) Artists, Aestheticisation and the Field of Gentrification. *Urban Studies*, 40(12), 2527–2544.
- Lipton, S. G. (1977). Evidence of Central-city Revival. *Journal of American Planning Association*, 43(2), 136-147.
- Marcuse, P. (1985). Gentrification, Abandonment, and Displacement: Connections, Causes, and Policy responses in New York City. *Journal of Urban and Contemporary Law*, 28(195), 195-240
- Matthews, S. A., J. E. Detwiler, et al. (2005). Geo-ethnography: Coupling Geographic Information Analysis Techniques with Ethnographic Methods in Urban Research. *Cartographica*, 40, 75-90.
- Pavlovskaya, M. (2006). Theorizing with GIS: a tool for critical geographies? *Environment and Planning, A* 38(11), 2003-2020.
- Rose, D. (1984). Rethinking gentrification: beyond the uneven development of Marxist theory. *Environment and Planning: Society and Space*, v. 2, 47-74.
- Schaffer, R. & Smith, N. (1986). The Gentrification of Harlem? *Annals of the Association of American Geographers*, 76(3), 347-365.
- Smith, N. (1987). Gentrification and the Rent Gap. *Annals of the Association of American Geographers*. 77(3), 462-465.
- Smith, N. (1996). *The New Urban Frontier: Gentrification and the Revanchist City*. London, UK: Routledge.
- Zukin, S. (1987). Gentrification: Culture and Capital in the Urban Core. *Annual Review of Sociology*, 13, 129-147.